

Title (en)
ELECTRONIC CIRCUIT CHIP CARRIER

Publication
EP 0042987 B1 19890308 (EN)

Application
EP 81104228 A 19810603

Priority
US 16411980 A 19800630

Abstract (en)
[origin: EP0042987A2] A carrier for microcircuit LSI chips (180) includes stacks (11) of parallel ceramic sheets (14) carrying thin conductive capacitor plates (20) laminated in a ceramic structure, in which the capacitor plates serve as power distribution conductors. Groups of plates provide electrical connection (19,21) between power supply strips (16) and conductor straps (95, 98) which are connected to solder bonds (181) for the chips. This provides capacitance to smooth the power supply to high switching speed VSL1 chips. Stacks (11) of laminated ceramic capacitors serving as power planes are inserted into slots in laminated ceramic sheets. Signal vias (42) are provided about the periphery of the power planes. A highly parallel distribution of current is provided by means of horizontal power conducting straps which reduce voltage fluctuations, electrical resistance, and current per via.

IPC 1-7
H05K 3/36; **H01G 4/30**; **H01L 23/12**; **H01L 23/56**; **H05K 1/16**

IPC 8 full level
H05K 1/18 (2006.01); **H01L 23/538** (2006.01); **H01L 23/64** (2006.01); **H05K 1/16** (2006.01); **H05K 1/03** (2006.01); **H05K 1/09** (2006.01); **H05K 3/46** (2006.01)

CPC (source: EP US)
H01L 23/5383 (2013.01 - EP US); **H01L 23/642** (2013.01 - EP US); **H05K 1/162** (2013.01 - EP US); **H01L 23/142** (2013.01 - EP US); **H01L 2224/16** (2013.01 - EP US); **H01L 2224/16225** (2013.01 - EP); **H01L 2224/16235** (2013.01 - EP US); **H01L 2924/01019** (2013.01 - EP US); **H01L 2924/01078** (2013.01 - EP US); **H01L 2924/09701** (2013.01 - EP US); **H01L 2924/3011** (2013.01 - EP US); **H05K 1/0306** (2013.01 - EP US); **H05K 1/092** (2013.01 - EP US); **H05K 1/185** (2013.01 - EP US); **H05K 3/4611** (2013.01 - EP US); **H05K 3/4629** (2013.01 - EP US); **H05K 2201/10015** (2013.01 - EP US)

Citation (examination)
US 3663866 A 19720516 - IOSUE MICHAEL F, et al

Cited by
EP0359513A3; EP0120500A3; FR2616963A1; EP0090964A3; EP0228953A1; FR2591801A1; US4755910A; EP0413021A4; EP0277546A1; US4907068A; EP0422828A1; EP0202877A3; EP0108211A3

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
EP 0042987 A2 19820106; **EP 0042987 A3 19841219**; **EP 0042987 B1 19890308**; DE 3177003 D1 19890413; JP S5728348 A 19820216; JP S5756217 B2 19821129; US 4328530 A 19820504

DOCDB simple family (application)
EP 81104228 A 19810603; DE 3177003 T 19810603; JP 8123881 A 19810529; US 16411980 A 19800630